ditional healing and therapeutic ritual, both Western and non-Western.

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P1.088

## Natural ingredient of Ignatius beans inhibits mTOR activity

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**Purpose:** This study screened a collection of >2,800 naturally occurring products and identified Ignatius beans extract capable of inhibiting mTORC1 activity. HeLa cells were treated with aqueous extract from Ignatius beans to assess the activity of mTORC1. Treatment of HeLa cells with Ignatius bean extract inhibits the enzymatic activity of mTORC1 as assessed by the phosphoylration of p70 S6K (S6K) at Thr 308 in HeLa cells. This plant seed extract also exerts inhibitory effects on the activation phosphorylation of Akt. In addition, flow cytometry analysis revealed that Ignatius bean extract causes HeLa cells to accumulate in G2/M phase of cell cycle. Trypan blue dye exclusion assay was carried out to determine the cytotoxicity of Ignatius Beans

**Methods:** This plant seed extract also exerts inhibitory effects on the activation phosphorylation of Akt. In addition, flow cytometry analysis revealed that Ignatius bean extract causes HeLa cells to accumulate in G2/M phase of cell cycle. Trypan blue dye exclusion assay was carried out todetermine the cytotoxicity of Ignatius Beans.

**Results:** This study has found that an aqueous extract from Ignatius beans inhibits mTORC1 activity as well as PI3K/Akt pathway resulting the accumulation of cell cycle at G2 to M phase in cultured human HeLa cells. This result suggests that the natural ingredient of Ignatius beans may directly inhibit mTORC1 activity or indirectly influence mTORC1 activity through the inhibition of Akt signaling. The inhibition of Akt phosphorylation at Thr308 strongly denies the involvement of negative feedback effect by PI3K/Akt pathway in cells treated with Ignatius bean extract.

**Conclusion:** These data suggest that Ignatius bean extract could be used as a potent inhibitor of cell growth and cell proliferation.

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## Safety control of manual vacuum pump for plastic cupping

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**Purpose:** In Korea, disposable cupping unit is applied to the patient for safe treatment. But, even though disposable cupping unit is used, there are still infection event exit yet. This study aims to find out the cause of infection occurs in the traditional medical clinic associated with cupping treatment.

**Methods:** Used manual vacuum pump was collected from 5 private hospitals and 8 university hospitals in airtight condition to prevent the additional contamination. Bacterial smear was made by blot of the inside surface of the connecting part between cupping unit and vacuum pump. Bacterial culture and identification is performed by the company specializing in microbiological analysis (ChunLab Inc., Seoul, Korea), using next generation sequencing and EzTaxon Database of ChunLab.

**Results:** Pathogenic microbes were found in 3 of 8 university hospitals' and 1 of 5 private hospitals' vacuum pumps. Bacterial family was found in the order methylobacteriaceae (29.95%), alcaligenaceae (14.92%), spiningomonadaceae(14.23%) etc.

**Conclusion:** Vacuum pump is modernized cupping method to control the negative pressure exquisitely. But, compare to the disposable cupping unit, the vacuum pump is used several times until broken down. Because of the multi-use vacuum pumps are easily contaminated and air exchange between cupping unit with vacuum pump can occur the contamination of the wound at blood-letting cupping treatment. To prevent the infection at blood-letting cupping treatment, not only the disinfection of wound but also the sterilization of whole cupping device including vacuum pump should be regarded.

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## Oryeongsan impreoves hypertonic stress-induced water channel expression and apoptosis in renal collecting duct cells

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**Purpose:** Oryeongsan (ORS, Wulingsan) has been reported to possess renal protective effects from renal diseases such as diabetes-induced renal damage, and nephrocalcinosis. This study was conducted to evaluate the inhibitory effect of ORS on hypertonic stress-induced AQP2 expression and apoptosis in murine inner medullary collecting duct cell line (mIMCD-3).

**Methods:** mMCD-3 were pretreated with ORS (50-120 ug/ml) for 1 h, and stimulated with 175 mM NaCl for 1 h. The supernatant, conditioned medium was collected for measurement of electrolyte levels and osmolality. The protein expression used western blot, and the mRNA expression used RT-PCR.

**Results:** Hypertonic stress (175 mM NaCl) increased in the levels of AQP2 expression by hypertonic stress in mIMCD-3. ORS attenuated the hypertonic stress-induced increase in protein levels of AQP2 in a concentration-dependent manner. Pretreatment with ORS presented the similar effect of